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ABSTRACT

This study analyzes longitudinal National Center for Education Statistics data, including individualized high school records, college entrance exams, and socioeconomic background. It looks at how admissions officers currently make decisions and trends in admissions decisions between 1979-2000. Reports findings of an Educational Testing Service poll of the American public on admissions questions. These data are applied to the nation's most competitive four-year colleges. Chapter 1, "Who Attends Selective Universities", finds that under current affirmative action policies, racial minorities and low-income students are underrepresented. Chapter 2, "Why It Matters Who Attends Selective Universities", finds that attending a selective institution provides greater likelihood of graduating, greater access to graduate schooling, and a wage premium in the labor market. Chapter 3, "Defining Merit and Fairness in College Admissions", examines how merit is defined by key audiences, concluding that a dynamic concept of merit is widely accepted as appropriate. Chapter 4, "Economic Affirmative Action", concludes that while selective colleges purport to provide preferences to low-income students, they actually do not provide systemic preference. Chapter 5, "Simulation of Alternative Admission Strategies", concludes that a system of grades and test scores would significantly reduce racial and ethnic diversity but increase income diversity. Chapter 6, "Policy Recommendations", emphasizes class rank plans, economic affirmative action, race based affirmative action, and financial aid policies. (Contains 43 endnotes and 19 tables/figures.) (SM)

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SOCIOECONOMIC STATUS, RACE/ETHNICITY, AND SELECTIVE COLLEGE ADMISSIONS

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This paper will be published in somewhat different form later this year by The Century Foundation as part of a volume of essays prepared for the Century Foundation's project on Low-Income Students in Higher Education. The volume also will include a paper by P. Michael Timpane and Arthur M. Hauptman exploring the issue of how academic preparation and performance of low-income students can be improved and another by Lawrence E. Gladieux looking at the affordability of higher education and low-income students.

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Introduction

The issue of affirmative action at our nation's top universities excites much interest and controversy in part because it goes to the very heart of what Americans mean by equal opportunity and meritocracy. This paper seeks to expand the traditional debate over race and ethnicity in selective admissions by analyzing the issue of whether low-income students, too, should benefit from affirmative action policies.

Along the way, we ask a series of questions: Who attends selective universities today? Does it matter who gets in? How do college administrators define merit and fairness in the admissions process? How are they defined by the public? How should they be defined? Do colleges currently give a leg up to economically disadvantaged students? If not, would students admitted under such preferences be qualified to do rigorous college level work? What would be the effect of replacing affirmative action with a variety of policies: a straight system of grades and test scores; a lottery of minimally qualified students; automatic admissions to the top ranking students in all high schools, irrespective of standardized test scores; an automatic admissions plan for top ranking students with a minimum standardized test requirement; and preferences for economically disadvantaged students? If economic preferences are advisable, should they replace, or supplement, racial affirmative action?

To answer these questions, we analyzed information from two sets of longitudinal data published by the National Center for Education Statistics. These data sets are extremely detailed, with individualized records of high school grades, college entrance exams, and socioeconomic background. Each student studied also took a test that provides a wealth of information about the many students who do not take the SAT or ACT. In the report, we also analyze data on how

admissions officers currently make decisions as well as trends in admissions decisions between 1979 and 2000, and we report the findings of an Educational Testing Service (ETS) poll of the American public on admissions questions. We then apply this data to the nation's most competitive 146 four-year colleges, which constitute the top two tiers in Barron's Guide to Colleges (those that are among the most selective 10 percent of approximately 1,400 four-year institutions and 6 percent of all postsecondary institutions).

In Chapter 1, we find that under current affirmative action policies, racial minorities are underrepresented, and that the underrepresentation of low-income students is even greater. In Chapter 2, we find that attending a selective institution provides three main advantages: greater likelihood of graduating, greater access to graduate schooling, and a wage premium in the labor market. In Chapter 3, we examine the evidence around how merit is defined by key audiences, and conclude that a dynamic concept of merit, which looks at how far someone has traveled, as well as where he or she ends up, is widely accepted as appropriate. We also find that preferences for minority status and the economically disadvantaged have fallen off over the past 30 years. In Chapter 4, we conclude that while selective colleges purport to provide preferences to low-income students, and say they would like to admit more if these students were academically prepared, on average the top 146 colleges do not provide a systemic preference, and could in fact admit far greater numbers of low-income students, including low-income minority students, who could handle the work. In Chapter 5, simulating the effects of a variety of race neutral admissions schemes, we conclude, among other things, that a system of grades and test scores would significantly reduce racial and ethnic diversity but would increase income diversity slightly; that lottery admissions have little public support; that class rank plans without a

minimum test score will greatly increase dropout rates; that class rank plans with a minimum test score reduce racial and ethnic diversity; and that economic preferences will somewhat reduce racial and ethnic diversity and greatly expand socioeconomic diversity.

In Chapter 6, we make a series of policy recommendations. We caution against the widespread use of the class rank approach to admissions because doing so can force a tradeoff between diversity and B.A. attainment. We urge the expansion of current affirmative action programs to include low-income students because they can add both economic and racial diversity. We call for maintaining existing racial affirmative action schemes in the interest of racial justice and the educational benefits of diversity. And we call for stronger financial aid policies to make offers of admissions to low-income students genuine, rather than hollow commitments.

Study Design

To demonstrate the complex reality of college admissions, we examined the academic characteristics of students who attend institutions at every level of selectivity (see the chart on the next page for our use of the *Barron's* definition of competitive colleges). We analyzed this information based on two sets of longitudinal data published by NCES: the *National Education Longitudinal Study of 1988* (NELS:88) and the *High School and Beyond* study (HS&B 80:92).

Approximately 1.2 million high school students who graduate each year enroll in one of the 1,400 accredited four-year colleges. Few of them who enroll in a four-year college (15 percent) will enroll in a top-tier four-year college. Another 20 percent who enroll in four-year colleges will enroll in a second-tier four-year college. The largest population (about 40 percent)

Barron's Definition of Competitive Colleges

The *Barron's* selectivity measures are determined by several factors that include: the median SAT I or median composite ACT entrance exam score; the student's high school class rank; student's average GPA; and the percentage of students accepted.

The *Barron's* selectivity measures group schools into six different levels from the most selective to the least selective that include: Most Competitive, Highly Competitive, Very Competitive, Competitive, Less Competitive, and Noncompetitive.

We use a simplified version that condenses the six levels into four tiers.

Top Tier—"Most" and "Highly" competitive. Generally, students in this tier are in the top 35 percent of their high school class, have a high school GPA that is B or better, and score about 1240 on the SAT I or above 27 on the ACT. Colleges in this tier accept less than 50 percent of the applicants. There are 146 four-year colleges in this category and approximately 170,000 students enroll as freshmen at these institutions each year.

Only a tiny percentage of the student population applies to the 146 most selective colleges—only a few hundred thousand out of three million high school graduates—and an even smaller group attends. Enrollments at the most selective 146 colleges represent less than 10 percent of the nation's postsecondary freshman class, including four-year and two-year colleges.

Second Tier—"Very" competitive. Colleges in this tier accept students in the middle of their class who have a minimum high school GPA of B- or higher, range of 1146 to 1238 on the SAT I or 24-26 on the ACT. The applicant acceptance rate is between 50 and 75 percent. Approximately 300,000 freshmen attend the 253 four-year colleges in this category.

Third Tier—"Competitive." Colleges in this tier generally accept students with a minimum high school GPA of C or better, who score above 1000 on the SAT I or above 21 on the ACT. The "preferred" students are in the top 50 to 65 percent of their high school class. Colleges in *Barron's* third tier generally accept 75 to 85 percent of the applicants. The 588 four-year institutions in this category enroll 570,000 freshmen.

Fourth Tier—"Less" competitive and "noncompetitive." These colleges accept students with scores below 1000 on the SAT I or below 21 on the ACT. The minimum GPA is C or less and high school rank is in the top 65 percent. College acceptance rate is generally above 85 percent. These 429 institutions generally enroll about 325,000 freshmen annually. (This tier does not include colleges that are mandated to accept all state residents.)

Source: Barron's Students' #1 Choice: Profiles of American Colleges, 23rd Edition. 2000.

enroll in third-tier institutions, leaving 25 percent going to fourth-tier colleges. So the top two tiers account for just more than one-third of enrollees.

The NELS:88 study began by collecting data on approximately 25,000 high school freshmen in 1988 and followed them through high school graduation in 1992 and their post-high school years to 1994. The HS&B study began in 1980 and continued to collect information on approximately 30,000 respondents during their college years and their first jobs.

Our analysis focuses on the class of 1995 but our findings on the racial and ethnic mix of college entrants shows the same shares as the subsequent 1997 freshman class data reported by Mike Nettles et al.[1]

Both the HS&B and NELS:88 surveys were remarkably detailed. A complete record of high school and college courses taken, as well as grades and college entrance exam scores, was created for each participant. In addition, each student, along with his or her parents, teachers, and principal, answered a wide range of questions about expectations, practices in the home and in the class room, the student's academic progress, high school environment, etc. Finally, each student was given a NELS test, an exam similar to the SAT. Since not all students take a college entrance exam, the NELS test provides a good benchmark for all students.

In determining family background, both HS&B and NELS:88 computed a measure of the SES of the family on the basis of reported income and parental education and occupations. Adelman (1999)[2] recommends using SES because family income is most often reported by the student and prone to large mistakes.

Each student record is unique: what high school he or she attended, which courses he or she took, his or her overall grade point average, extracurricular activities, and teacher

recommendations. Because there is variation among high school grading practices and courses taken, college entrance exam and NELS test scores are used to facilitate comparisons across diverse schools and curricula. For this reason, exam scores are often used as the best available single statistic describing student achievement.*

High school grades and class rank correlate with college entrance exam scores but not completely. For example, even among students in the top 10 percent of their high school class, 24 percent either did not take the SAT or ACT or scored below 1000 on their combined math and English tests, while 43 percent scored over 1300.

1. Who Attends Selective Universities

Access to selective colleges is highly skewed by race and ethnicity, although not as much as by SES. While Asians attain a greater share of seats in four-year colleges than their share of 18-year-olds, African Americans and Hispanics constituted only 6 percent each of the freshman classes of the 146 "most" and "highly" selective four-year colleges. By contrast, African Americans and Hispanics were 15 and 13 percent, respectively, of all 18-year-olds in 1995. So, Blacks and Hispanics were considerably underrepresented at these top schools even with affirmative action.

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* Test scores need to be put in some context because they do not measure all forms of "merit" and because of natural variation and luck. On the day of the exam, some students may have made correct "educated guesses" or been asked a series of questions that they were particularly familiar with. Conversely, other students made "bad guesses" or were asked about material that was outside their knowledge base. Throughout this report, we convert ACT scores into their SAT equivalent and re port the data as "SAT equivalent" scores.

There is even less socioeconomic diversity than racial or ethnic diversity at the most selective colleges (see Table 1.1, page 69). We find that 74 percent of the students at the top 146 highly selective colleges came from families in the top quarter of the SES scale (as measured by combining family income and the education and occupations of the parents), just 3 percent came from the bottom SES quartile, and roughly 10 percent came from the bottom half of the SES scale.[3]

If attendance at these institutions reflected the population at large, 85,000 students (rather than 17,000) would have been from the bottom two SES quartiles. Overall, a little more than 22 percent of the students in the top tier of college selectivity are Asian, African American, or Hispanic (11 percent Asian, 6 percent Black, and 6 percent Hispanic), while only 3 percent are from families in the lowest SES quartile and only 10 percent are from the bottom half of the SES distribution. There are four times as many African American and Hispanic students as there are students from the lowest SES quartile.

2. Why It Matters Who Attends Selective Universities

The economic benefits of attending a selective college are clear. Selective colleges spend as much as four times more per student and subsidize student spending by as much as $24,000, compared to a student subsidy of as little as $2,000 at the least selective colleges. Students at selective colleges have higher graduation rates than similarly qualified students at less selective colleges. In addition, the student support, preparation, and prestige at selective colleges result in higher rates of acceptance at graduate and professional schools among equally qualified high school students. While the differences in earnings for equally qualified students from "less" and

"more" selective schools are small, they do appear to exist and may be understated due to data limitations. Moreover, these differential effects are magnified for less advantaged or minority students who would not have been otherwise admitted without outreach, special consideration, or support.

Spending Levels

According to Hoxby, the competition among colleges also has resulted in a growing disparity by level of selectivity in their charitable and endowed resources and spending per student. For instance, spending per student ranges from nearly $30,000 at the highest-subsidy schools where test scores averaged about 1100 on the SAT scale to under $8,000 at the least endowed schools where test scores averaged about 950 on the SAT scale. Moreover, due to the large differences in subsidies, students at the most selective and most highly subsidized schools pay $6,000 for a $30,000 education; students at the least subsidized schools pay about $6,000 for an $8,000 education.[4]

Graduation Rates

Another of the major benefits of attending a top-tier college is their higher graduation rates: 86 percent of students who initially enrolled in the 146 top-tier colleges ended up with bachelor's degrees. By contrast, as we move down the tiers of selectivity, the graduation rates fall to 71, 61, and 54 percent, respectively (see Table 2.1, page 69).[5] Obviously, a lot of this difference has to do with the quality of students in each tier. Table 2.1 also shows that students who have the highest SAT scores have higher graduation rates.[6]

But even adjusting for student test scores, students at top-tier colleges are more likely to complete their degree than students in the fourth-tier colleges with similar college entrance exam scores. For example, among students who score above 1200 on the SAT/ACT, 96 percent graduate from top-tier institutions, 86 percent graduate from second-tier colleges, and 75 percent graduate from third- and fourth-tier colleges. For those with an SAT-equivalent score between 1000 and 1100, 86 percent graduate from top-tier colleges, 83 percent from second-tier institutions, 71 percent from third-tier colleges, and only 67 percent graduate from the 429 fourth-tier colleges.[7]

It is hard to determine empirically why the top-tier colleges have higher graduation rates than less selective colleges. Intuitively, one might expect the opposite—it would be harder to graduate from more demanding institutions. In particular, one would expect that highly talented students would have no difficulty finishing programs at less demanding institutions. But the evidence does not support either of these common-sense views. Perhaps peer interactions and high expectations about performance at top-tier colleges create an atmosphere in which students work harder and graduate. Perhaps, when an institution expects everyone to graduate, it is more likely to identify students having problems and to intervene to help them. Perhaps students with high expectations are drawn to colleges with matching expectations.

Table 2.2, page 70, presents the unadjusted graduation rates of students who enrolled in four-year colleges by the SES standing of their family in high school and by the selectivity of the college. While those from families in the lowest SES quartile had a graduation rate of 55 percent, those from the highest SES quartile had a much higher rate, 73 percent. Virtually all of this 18 percentage point difference is determined by factors prior to enrolling in college—i.e., SAT

scores, high school grades, rigor of high school courses taken, etc. But the numbers in this table show that within colleges, students from lower SES families are more likely to have trouble graduating. For example, at the top-tier institutions, 90 percent of students from the highest quartile SES families graduated, while 76 percent of those from the lowest SES quartile graduated.

Our findings are consistent with another study using HS&B in which students from low-SES families were shown to have lower college graduation rates than students from higher-SES families, even when they both had taken a rigorous high school curriculum. In this study, among those who took the same rigorous curriculum, more than 85 percent of high school students from families in the highest SES quintile complete a bachelor's degree, compared with 62 percent of students from the lowest SES quintile.[8]

Post Graduate Access

Another benefit of top-tier colleges is that they provide greater access to post-graduate schools. Nationally, 21 percent of those who attend four-year colleges proceed on to graduate school (see Table 2.3, page 70). However, over 35 percent of students at the 146 top-tier colleges go on to graduate work. Moving down the scale of selectivity, the ratio of students going on progressively falls from less than 25 percent for students from second-tier colleges to 15 percent for those at third- and fourth-tier institutions.

Much of this difference is associated with differences in SAT-equivalent scores, which are strongly correlated with graduate school attendance. While relatively few who had SAT-equivalent scores below 1000 pursued a graduate education, fully 38 percent of those who scored

above 1200 attended graduate schools. Even within the same levels of college selectivity, students with higher SAT scores were more likely to pursue post-baccalaureate work. For example, in top-tier colleges, nearly half went on to graduate school if their SAT-equivalent scores were above 1200, while only one-quarter went on if their scores were between 1000 and 1200. The few students with scores below 1000 at these institutions had an even lower percent of graduate school participation.

There is a similar interaction between an SAT-equivalent score and graduate school going at all levels of selectivity.[9] For second-tier colleges, those with scores above 1200 are quite likely to attend graduate school (43 percent), while only half of that number (22 percent) go on if their initial scores were between 1000 and 1200. For third-tier colleges, there is a clear gradient with 28 percent going to graduate school if their scores are above 1200 and only slightly more than 10 percent going if their scores are under 900. At the fourth-tier colleges, an SAT-equivalent score of 1000 seems to be the dividing line: above that score, almost one in four go on to graduate degrees, while below that score fewer than one in ten go on to graduate education.

In terms of going on to graduate school, the level of selectivity of colleges has a positive effect on students with similar SAT scores.[10] For example, among those with SAT-equivalent scores greater than 1200, the group most likely to attend graduate school, 48 percent of those attending top-tier colleges and 43 percent of those attending second-tier colleges pursued graduate work. However, students who scored greater than 1200 but who attended one of the colleges in the bottom two tiers of selectivity were much less likely to attend graduate school. For students with scores below 1200, a similar effect is evident although it is of a smaller magnitude.

Wage Premium

One would expect that another benefit that comes with attending a top-tier college would be greater labor market success. The research on this question is somewhat ambiguous with the added effect of attending a highly selective college among similarly qualified students usually found to be between 5 and 20 percent. The key word here is "added" effect. Because the top-tier colleges tend to have the highest share of talented students, it may be that it is not the institution but the student who matters most. Therefore, researchers have to look at the fate of students with similar abilities who go to colleges of different quality.

This requirement makes getting a reliable estimate difficult because of the data needs. In order to perform these calculations, researchers need information about: students' family background, their academic ability (grades in high school and college, and college entrance exam scores), educational attainment, college major (which turns out to be quite important), and measures of labor force performance. The HS&B survey and a few other data sources have this information but suffer from two important weaknesses.

First, because of data limitations, estimates of earnings differences are almost always based on earnings at the beginning of these students' careers. There are reasons to believe however that early earnings differences may not adequately reflect those differences later in life. For example, Wood et al.[11] compared the earnings of male and female graduates from the University of Michigan Law School (classes of 1972 through 1975). The mean first-year earnings of employed women were just 10 percent less than that of employed men, $36,850 to $39,428 (in 1989 dollars). By the fifteenth year after graduation, the difference rose to 40 percent ($86,335 to $140,917). Similarly, Dunifon and Duncan[12] found that the effect of motivation on

labor market performance was very different early in one's life than in mid-career. Using the PSID, they were able to perform calculations on the same men at different points of their career. When they were 21- to 29-years-old, the results showed that results of a psychological test meant to measure motivation had no effect on earnings. But, when these computations were rerun with the earnings of the same men 15 to 25 years later, a positive impact was found for those who scored high on the motivation test administered in their twenties.

Second, the available data lack adequate variation in key variables. When all the students who go to selective colleges are academically able, it is difficult to separate out the effects of the college from the ability of the students. The ideal experiment would be to track the experience of four top students at New Trier High School (one of the nation's best) who all come from wealthy families with highly educated parents. If each of these students had identical high grades and high test scores, we could assign them to colleges that vary widely in selectivity. For statistical purposes, the best scenario would be if they all majored in the same subject. Then, if we collected their future earnings information, we would have a fairly reliable sense of the independent effect of the college quality.

In reality, however, all four of these top students would attend one of the top-tier colleges or a close substitute, which would provide very little variation to test for the independent effect of college quality. In a series of papers, Cawley et al.[13] show that this lack of variation in the data may affect the results greatly. So, we are left with a series of studies that may be of questionable validity. Nonetheless, we report these findings.

A recent NCES publication[14] typifies the problem of assessing earnings returns to college selectivity when the data only track students early in their careers. The NCES study used HS&B

data to measure the added earnings of those five years after graduation from a highly selective institution. They tried a variety of approaches and mostly found small additional returns (about 5 to 10 percent per year) to attending a highly selective college once the original endowment of the students was taken into account. However, the same report found that there were no economic returns to attending graduate school. This is a quite surprising finding given that, among older workers, those with graduate degrees earn 30 percent more per year than those with just bachelor's degrees.

Using HS&B, Kane[15] found that an increase in the college selectivity, equivalent to requiring an extra 100 points on the combined SAT score, resulted in a 6 percent increase in earnings. Thus, going from an average four-year college to one in the top 10 percent would tend to increase earnings by a little more than 11 percent. Daniel et al.[16] (using yet another survey—the 1979 National Longitudinal Survey of Youth) actually found smaller returns to college quality with the earnings differences between someone attending a college in the top fifth of the selectivity being only 13 percent more than a similar person who attended a college in the bottom fifth of selectivity.[17]

Dale and Krueger,[18] use a highly sophistical statistical estimation procedure on two data sets to determine whether there are substantial earnings gains from attending a more selective college. The authors find that if colleges are ranked along Barron's scale, then going to more selective college can mean a 10 percent increase per year in one's earnings after adjusting for the quality of the student when he or she enrolls in college. However, if colleges are ranked by their SAT scores of their incoming students, then no effect is found. Under all cases, they find that students from low-SES families earn more than similarly situated students who do not attend

highly selective colleges and get a bigger payoff than students from better-off families for going to a highly selective.

Brewer et al.[19] grouped four-year colleges and universities into one of six mutually exclusive categories based upon *Barron's* ratings: top, middle, and less selective private colleges, and top, middle, and less selective public colleges. They found that, all other things being equal, there was about a 20 percent wage premium to initially attending a top private college and a 10 percent wage premium to attending a middle private college, relative to the wages earned by those initially attending a less selective public college.

Finally, Behrman et al.[20] found much larger differences using a data source that followed 708 female pairs of twins. Each twin pair attended the same primary and secondary schools, and thus the pre-college resources devoted to each twin were very similar. About half of the twins who attended college went to different institutions. Thus, this group seemingly presents a natural experiment in which most prior events are similar with the only difference being the quality of the college attended. They attempted to capture "college quality" by using six attributes: total spending per student, size of enrollment, whether public or private, students per faculty, whether the college grants Ph.D.s, and the professors' pay.

Using these data, they found that the twins who attended Ph.D.-granting private colleges with small enrollments and well-paid professors had significantly higher earnings later on in life. They vividly summarized the implications of these results by showing the estimated earnings differentials resulting from the differences in characteristics at four colleges—a large public college, a large public research university, a small private college, and a large private research university. Thus, a baccalaureate from a large public research university would earn about 32

percent more annually than if she had not gone any farther than high school. If, however, she had attended a large private research university, the baccalaureate/high school earnings differential would be greater than 55 percent. Of course, tuition at a large private research university exceeds tuition at a large public research university. Behrman et al.[21] calculate that the greater earnings of a large private research university baccalaureate amount to over $170,000 (in 1994 dollars) over the remaining work life. This suggests that attendance at large, private, expensive research universities may be a wise financial course relative to comparable, less expensive, public universities.

All of this research seems to find that the added earnings differences of attending a highly selective college is worth the added cost of tuition but not in orders of magnitude more than attending a less selective college. This conclusion may surprise many parents who think that the particular college their children attend is of paramount economic importance. While there is reason to think that these estimates may be low, the competition to get into the top colleges, while probably more intense than the rewards would justify, probably motivates students to take their coursework seriously and try to improve their overall skill levels. Even being aware of a relatively small payoff for bachelor's degrees at top-tier colleges, parents still might prefer sending their children to these colleges because of the peer effects of being with highly motivated and skilled students and because of the higher graduation rates and probability of continuing on to graduate school.

3. Defining Merit and Fairness in College Admissions

Defining merit and fairness in admissions goes directly to the question of values. In this section, we examine the views of admissions officers, and the public, both of which define merit not just in absolute terms, but also in terms of obstacles overcome. We then present data on how obstacles might be defined, by socioeconomic status, and race.

Admissions Officers

There is broad agreement among admissions officers that admission should be based on "merit." Definitions of merit vary, but the common perspective in the merit-based admissions decisions is to judge applicants on the basis of their high school achievements. From this perspective, students are sorted most commonly on the basis of their ranking in a hierarchy comprised of grades, test scores, recommendations, leadership, and other achievements regardless of where those achievements occurred and regardless of the applicant's socioeconomic background.

At the same time, many college officials also believe that merit is a "dynamic concept" in that merit should be measured not only by the applicants' academic achievements but by how many obstacles they had to overcome to achieve them.

According to a report on admissions policy from a group of college officials convened by The College Board:[22]

> (W)e should consider what a student has had to overcome in order to qualify for a competitive selection process. Not all students have had the same educational opportunities. For some students, even surpassing the

> basic eligibility hurdle in order to be considered for admission at a selective institution represents a major achievement . . . Contrary to the perception of some in the general public, employing an applicant's ability to overcome educational obstacles as a selection criterion is not simply a means to correct past inequities. . . . Students who demonstrate the ability to rise above their early lives' social and economic limitations are likely to face future hurdles with the same determination and perseverance.

At the 1999 College Board meetings, the attendees identified nine mission-related perspectives, many of which apply at different stages of the admissions process and to different segments of the applicant pool (see the chart on page 24).

Two of these (Entitlement and Open Access) are "nonselective" in that judgments about admissions are made on the basis of general principles rather than on a competition among students based on their qualifications. The other seven perspectives can be thought of as "selective" models in that students are compared to each other on the basis of certain criteria and a decision is made to admit some while not admitting others.

Two perspectives (Meritocracy and Character) relate to a prospective student's capacity to perform in the college environment based on demonstrated performance prior to college. These perspectives tend to see admission to higher education as a reward for performance in high school.

The next perspective (Enhancement) place a higher value on what the student gets out of college and conceive of higher education as a way to bring the most benefit to those selected for admission.

Admissions officers also see college as a social tool to promote upward mobility (Mobilization) and to ensure that postsecondary education does not become a passive participant in reproducing social, cultural and economic elites. One perspective (Investment) tends to focus on long-term social goals.

Finally, there are two perspectives (Environmental/Institutional, and Fiduciary) concerned with the effect that potential students will have on helping the college meet its own institutional and financial needs.

Colleges and universities also admit students to meet student body needs—according to The College Board, "not because they are the best candidates but because they best fit the needs of the instructional environment." Most higher education institutions find that diversity is essential to educational quality.

At the same time, virtually all colleges and universities devise admissions policies intended to achieve broad social goals. These goals are most often associated with promoting broadly based inclusion not only in higher education but in society itself. In some cases, postsecondary institutions attempt to make up for inequality in the opportunity to learn in the pre-K-12 education system or choose students who seem likely to make significant contributions to the broader society or to minority or low-SES communities. This perspective suggests that institutions need to look beyond standardized measures of achievement to consider what students might achieve if given a chance.

The view that students ought to be selected based on their ability to benefit or their ability to contribute in the broader society turns the traditional admissions model on its head. It focuses

The College Board Taxonomy of the Admissions Decision-Making Process

Entitlement

- Higher education is an inalienable right and should be made available to everyone.

Open Access

- College is a natural progression after high school and should be made available to everyone who is qualified.

Meritocracy

- Access to higher education is a reward for those who have been most academically successful.

Character

- Access to higher education is a reward for personal virtue, dedication, perseverance, community service, and hard work.

Enhancement

- The goal of higher education is to seek out and nurture talent.

Mobilization

- Higher education is the "great equalizer" and must promote social and economic mobility.

Investment

- Access to higher education should promote the greater good and further the development of society.

Environmental/Institutional

- The admissions selection process is designed to meet the enrollment goals and unique organizational needs of the admitting institution while promoting the overall quality of students' educational experience.

Fiduciary

- Higher education is a business, and access must first preserve the institution's fiscal integrity.

Source: Adapted from The College Board, *Toward a Taxonomy of the Admissions Decision-Making Process* (New York: College Entrance Examination Board, 1999).

on the value added by the college to the student rather than the value added by the student to the institution.

The best available data on trends in student application and college admissions decisions come from four surveys of college admissions practices conducted by various professional societies and testing agencies in 1979, 1985, 1992, and 2000. A joint effort among survey sponsors to track the longitudinal implications of those separate surveys was finished in 2000.[23] The data used in the following paragraphs are based on their hard work in tracking common findings across disparate surveys.

Over the 1992 to 2000 period, the share of colleges that actively recruited minority students fell from 67 to 51 percent. The largest falloff was in public colleges where the anti-affirmative action movement has had its strongest impact. Minority recruitment declined from 91 to 66 percent of four-year public colleges and from 66 to 49 percent of two-year public colleges. The share of private colleges involved in minority recruitment also declined from 65 to 54 percent in four-year private colleges and from 36 to 21 percent in two-year private colleges (see Table 3.1, page 71).

The share of colleges that recruits economically disadvantaged students is generally a little more than half of those that recruit minorities. Generally, the share remained the same in four-year private colleges (24 percent) and declined in two-year private colleges (from 24 to 16 percent). Among public institutions, the shares of institutions that recruited economically disadvantaged students increased slightly for two-year public colleges (from 45 to 47 percent) and declined from 44 to 37 percent in four-year public colleges.

Trends in financial aid practices in colleges between 1979 and 2000 did not favor low-income and minority students. Over 80 percent of all institutions continued the practice of admitting students before aid is considered, a practice that encourages sticker price shock and discourages low-income student applications. In all postsecondary institutions, except two-year public colleges, there was an increase in the share of students whose financial needs were not fully met between 1992 and 2000, a finding consistent with other data. In the same survey, respondents also reported an increase in the average amount of unmet need. Although the share of colleges that gives aid to minority and low-income students is rising, aid for academically talented students is more pervasive (see Table 3.2, page 72). In addition, the share of state aid going to "no need" students is rising. Respondents in the 2000 survey estimated an average increase of 36 percent in "no need" awards since 1995. Financial aid for economic disadvantage (29 percent among four year colleges) ranks lower than racial/ethnic minorities (32 percent), athletes (32 percent), students with special nonacademic talents (37 percent), and academically talented students (57 percent).

The American Public

To gauge public views on this important topic, we conducted an extensive examination of public views about affirmative action. We conducted our own nationwide poll of more than 2,100 adults in October 1999, in partnership with Princeton Survey Research Associates (PSRA). That telephone survey included a series of questions to assess general attitudes about opportunity and success in life, as well as about a range of possible factors that colleges and universities might use in their admissions decision.[24]

There is broad agreement that individual academic achievement, and the character traits of hard work and personal motivation it requires, should govern the distribution of opportunity in higher education. Yet, for most Americans, the definition of academic merit is also contextual. While academic achievement is the primary measure of merit, high academic achievement in spite of disadvantages, especially low SES, is viewed as especially meritorious and deserving. Nonetheless, in general the American opportunity narrative does not favor policies that give more weight to social or economic circumstances than academic credentials.

The public clearly views academic readiness as the primary factor that should be considered in admissions decisions but is willing to favor high-achieving, low-SES students over similarly qualified students. When presented with a series of alternative admissions strategies, the public dismissed lotteries, was ambiguous about race and ethnicity, and clearly supported strategies that mixed socioeconomic factors with academic merit -- such as class rank within high schools or preferences for high-achieving low-income students.

Americans are still committed to economic and racial diversity in colleges. Although they do not favor admissions based on race, all by itself, they do favor admissions strategies that are mindful of their effects on racial and income diversity. Broad public support for approaches that give priority to students whose grades give them high class rank in their respective high schools, irrespective of their test scores, is a case in point. High schools whose high-ranking students do not have commensurate test scores tend to be schools with high concentrations of minorities or low-income students. The public also favors outreach to low-income and minority students. Moreover, the public supports preferences for students from low-income families, which is where minority and low-income students are concentrated.

The public recognizes academic merit as a core requirement but leaves lots of room for other factors for choosing among the academically qualified, especially for economically disadvantaged students. Our strategies for inclusion tend to reward individual striving. While all striving has merit, striving against physical, social, economic, and cultural barriers is regarded as especially meritorious. In American culture, merit is measured not only by where one stands, but also by how far one had to go to get there. Americans are still willing to give special breaks to people who show "the right stuff" in overcoming barriers.

Almost two-thirds of Americans favor preferences for equally qualified low-income students over higher-income students. About one-third favor preferences for low-income students even when they have slightly lower grades and test scores, compared with students from high-income families.

Americans also strongly associate affirmative action with racial preferences and do not view racial preferences favorably. Among White Americans, 52 percent say affirmative action should be abolished,[25] and more than 80 percent oppose preference in hiring and promotions for racial minorities, even when the programs may help compensate for "past discrimination."[26] Our polling is consistent with the findings of other research that has found that Americans endorse policies that promote upward mobility for high-achieving students from poor and working-class backgrounds. A large segment wants to reward and encourage students who succeed despite heavy odds. Many believe colleges should enroll such students even if their test scores and grades fall slightly below those of other high-income applicants.

In our poll, two-thirds of respondents said qualified low-income students should, at least in some cases, have an advantage in college admissions over equally qualified students from non-poor families.

We found, too, that Americans recognize the link between higher education and success. In our polling, respondents said educational institutions have the primary role among American institutions for promoting upward mobility. As Table 3.3, page 72, illustrates, Americans vest immense importance in education. By a wide margin, respondents to the ETS/PSRA survey said public schools should play a primary role in helping young people get ahead in life.

Colleges and universities, too, shoulder a big responsibility in the public mind for promoting young people's success. The public ranks schools—especially public schools and colleges—far ahead of government, business, and industry, churches, and the military as the institutions most responsible for ensuring upward mobility.

Americans associate disadvantage with income more than with race. Low-income status is considered by 83 percent of those surveyed to be a disadvantage. A majority of respondents said being Black or Hispanic is a disadvantage if the person is also from a low-income family. Notably, while few said being White is a disadvantage in itself, 71 percent said being White and from a low-income family is a disadvantage. Growing up in a family that does not speak English, or growing up in a single-parent family, also were seen as major drawbacks in America. Being Hispanic of African American was seen as a disadvantage by roughly half of those polled, as seen in Table 3.4, page 73.

TTS/PSRA survey respondents were nearly unanimous that— in principle—society should help less advantaged people get ahead in life, as Table 3.5, page 73, illustrates.

Among respondents, 91 percent agreed that people who start out with little and work their way up are the "real success stories." There was equally strong agreement that society should help people who are working hard to overcome disadvantages. The survey also shows how strongly the American public rejects the notion of not helping those in need. Seventy-two percent disagreed with the statement that there is nothing society can do about people who are born poor. An even larger majority -- 81 percent -- disagreed that no one, even if starting out "with more disadvantages than most," should receive special help.

Most Americans accept the notion that, at least in some cases, students from low-income families should be given extra consideration in college admissions. As Table 3.6, page 74, illustrates, 65 percent in the ETS/PSRA survey said qualified low-income students should sometimes or always have an advantage over equally qualified students who are not from low-income families. About one-third said that should happen only rarely or never.

If a rich and a poor student are equally qualified, who should a college admit? Americans overwhelmingly favor the less advantaged student over the wealthier student, as Table 3.7, page 74, reports.

But as Table 3.8, page 75, shows, public opinion shifts significantly if the low-income student has slightly lower test scores than the student from a more advantaged family. Now, only one-third of survey respondents would admit that low-income student, compared to two-thirds who would choose the low-income student if scores were equal.

Among ETS/PSRA survey respondents with family incomes under $30,000, 73 percent would give low-income students an admissions advantage, at least in some cases, over

equally qualified students who are not from low-income families. By contrast, 60 percent of those with family incomes of $50,000 or more would give low-income students an advantage. Among Democrats in the ETS/PSRA survey, 72 percent believe low-income students should, at least in some cases, have an advantage in college admissions, compared to 64 percent of Independents and 60 percent of Republicans. While support varies, then, there is strong support even among the wealthy and among Republicans to providing a leg up to low-income students.

Although public opinion toward alternative college admissions strategies varies considerably, a large majority of Americans supports increased funding for programs to help students from low-income families get a college education. As Table 3.9, page 75, shows, 81 percent favor increased state funding to make sure all students can take classes to prepare for college admissions tests like the SAT or ACT. Nearly as many support increased funding for scholarship and loan programs and for offering college credit or advanced placement courses in high schools.

Data on Defining Obstacles by Socioeconomic Status and Race

If college admissions officers and the American Public agree that "merit" should be defined as achievement in light of obstacles overcome, what does the social science data say about the role of obstacles like low socioeconomic status, and being a racial minority?

SES

Youth in higher-income families with college-educated parents are doubly advantaged. They find college, especially the more expensive highly selective colleges, more affordable. More importantly, their childhood and adolescent development are nested in neighborhoods,

high-quality schools, and home environments that provide the necessary social support, information, and encouragement for academic readiness for college.

As the strength of the relationship between education and income grows, families with the highest incomes are increasingly likely to be parents with the highest level of educational attainment. Conversely, low-income families increasingly have parents with low education levels. We are increasingly clustered into families with both high-parental education and income and families with neither high-parental education nor income. As a result, two roads to college are converging into a single narrower pathway. For example, in the early post-World War II era, blue-collar men with union jobs had sufficient income to live in neighborhoods with good schools and other forms of supportive social capital from libraries to public safety to peer support among similar students from upwardly mobile families. Many of these students went on to college, even though their parents had high school or less. At the same time, there were families with relatively high levels of parental education but less income. The children of schoolteachers, for instance, went on to college more because of high-parental expectations for the education of their children than because of their family income. As the distribution of American families polarizes into a cluster with high income and parental education and another with neither, access to college and choices among colleges by price and selectivity will become more polarized by income class, with the least access and choice concentrated among low-income African American and Hispanic families.

Most researchers agree that the relationship between parental education and income creates a virtuous intergenerational circle of success. Simply put, parental education increases parental income, which in turn tends to increase time and resource investments in children and

educational expectations. All of these factors lead to higher rates of high school completion and readiness for college. Those who are most ready are more likely to enroll, persist, and graduate. Those who graduate tend to get good jobs with long-term earnings potential. Their children are raised in households with both high earnings and high levels of parental education, continuing the virtuous circle of education and income into the next generation.

Low educational expectations are especially prevalent in the lowest SES quartile of families. Among eighth-grade students surveyed in 1988, 42 percent of those from families in the lowest SES quartile aspired to bachelor's degrees, compared to 64 percent of students from the middle two SES quartiles and 89 percent of top quartile SES students.[27] These expectations affect the likelihood that students will take the necessary steps to attend a top-tier, highly selective college as well as performance on college entrance exams. Thus, students from families who expected their children to attend a four-year college—about one-third of the total by our definition of the variable—were more likely to take the SAT or ACT and were more likely to score higher when they did than students who had lower expectations.[28]

The obstacles students in low-income families face are so significant that just 7 percent of students from the bottom SES quartile scored in the top 25 percent of NELS exam takers. By contrast, 50 percent of those families in the top SES scored in the top quartile of test takers in the NELS exam for high school students. At the opposite extreme, 39 percent of students from low-SES families, compared with 8 percent from high-SES families were in the bottom quartile of this exam.[29]

The pool of students with high scores on college entrance exams is highly skewed by SES. Nearly two out of three students who score higher than an SAT-equivalent score of 1300 --

i.e., in the highest 8 percent -- are from the top SES quartile (see Table 3.10, page 76). Of those who scored between 1200 and 1300, 58 percent were from the top SES quartile. By contrast, just 3 percent of those who scored above 1300 and 4 percent of those who scored between 1200 and 1300 come from the lowest SES quartile.

These effects are compounded to the extent that residential patterns tend to segregate students by SES among high schools. Students with higher SES tend to go to high schools that are more successful in providing access to college, especially highly selective colleges. There is further segregation of students within high schools, with low-SES students less likely to take the more rigorous college preparatory curriculum. The separation of high- and low-SES students, both among and within high schools, also reduces the positive "peer effects" that come from mixing students with different SES characteristics.[30]

American high schools vary widely in terms of qualifications of teachers, feelings of personal safety, amount of homework, and access to technology as well as family, peer, and community support, and expectations. But there are no accessible measures that differentiate high schools by their relative level of advantages. We use the share of students who receive subsidized lunches as a proxy for the peer influences of the high school. The question to be addressed in this section is: Do students from the same SES quartile perform the same or differently in different kinds of high schools?[31]

Kahlenberg cites a variety of studies that show that younger children from low-SES families perform better if they attend high-income high schools. In order to try to isolate the independent effects of family-class origin and the quality of the high school, we tracked how students from different kinds of families (SES quartiles) performed at different types of high

schools based on three levels of receiving subsidized lunches (low-income high schools: greater than 30 percent; medium income: 10 to 30 percent; and high quality: 0 to 10 percent).

Our data support Kahlenberg's view. We find an inverse relationship between the percentage of students receiving subsidized lunches in high schools and the percentage of their students who took college entrance exams. In high schools where no more than 10 percent receive subsidized lunches (high-income high schools), 64 percent took a college entrance exam, compared to only 37 percent in high schools where greater than 30 percent of the students receive subsidized lunches (low-income high schools). The same pattern is evident in the share of students who achieved an SAT-equivalent score above 1000. At high-income high schools, 40 percent of test takers had an SAT-equivalent score of 1000 or better versus 19 percent in low-income high schools.

Low-SES students do better in high-income high schools. As Table 3.11, page 76, shows, only 24 percent of students in the bottom SES quartile scored in the top half of the NELS test if they attended low-income high schools. By contrast, 36 percent of students from families in the bottom SES quartile who attended high-income high schools were in the top half of the NELS test-score distribution.

High school attended did affect the selectivity of four-year colleges that students attended. As Table 3.12, page 77, shows, one-half of the college students from the lowest-SES families and the lowest-income high schools went to the fourth-tier, less selective colleges (basically open admission); only 16 percent of these students went to one of our top two tiers of selectivity. In contrast, low-SES college students from high-income high schools were more

likely to attend top-tier, highly selective colleges: only 21 percent went to the fourth-tier, less selective colleges and 30 percent went to a college in one of the top two tiers.

Race and Ethnicity

Our findings are analogous to many others who show that the inequality in educational opportunity among African Americans and Hispanics cannot be completely explained by SES or school variables. Race and ethnicity matter in the distribution of opportunity, independent of other factors. Socioeconomic status does not explain why 75 percent of those who live in neighborhoods with the highest concentrations of poverty are racial or ethnic minorities.[32] We find that 12 percent of Asians, 16 percent of Whites, 25 percent of African Americans, and 29 percent of Hispanics go to high schools with the lowest share of students going on to four-year colleges. Similarly we find that 44 percent of Asians, 41 percent of Whites, 16 percent of African Americans, and 14 percent of Hispanics go to high schools with the lowest share of students (0-10 percent) who get subsidized school lunches.

Blacks and Hispanics make up a higher proportion of those who attend high schools with the lowest rates of college attendance, the highest proportions of subsidized school lunches, and the lowest "social capital" (see Figure 3.1, page 79). While non-Hispanic Whites comprise 65 percent of the students at schools where the fewest students go directly to four-year colleges, they account for 77 percent of the population of schools where at least a majority attends such colleges. The difference is even greater when schools are differentiated by percentage of students who receive subsidized lunches. Whites are 84 percent of the student body at schools with the fewest subsidized students, and 49 percent of schools where more students receive subsidies. By

way of contrast, Blacks are 6 percent of the student body at schools with the fewest subsidized students and 24 percent at schools where more students receive subsidized lunches. The corresponding percents for Hispanics are 5 and 23, respectively. The broad dispersion of low-income Whites and the isolation of low-income minorities is compelling evidence of the persistence of racial stigma.

The view that race shouldn't matter reflects a narrow moral stance. It relies solely on a procedural standard of equal treatment rather than a broader standard that considers the racial distribution of the opportunity to learn or the racial distribution of degrees from prestigious colleges.[33] It is what Michael Waltzer calls "thin" morality or the slavish ahistorical adherence to an ideal. By way of contrast, "thick " morality is the ability to compromise the ideal in order to see it fulfilled.[34] As Glenn C. Loury points out, correcting procedural discrimination does not correct for the effects of its violations.[35] How else except racial stigma can we explain the fact that 2 percent of Black women between the ages of 25- and 34-years-old are married to White men compared with 39 percent of Hispanic women and 70 percent of Asian women.[36]

4. Economic Affirmative Action

Given broad societal agreement among the public and college admissions officers that obstacles overcome should be part of how we define merit, what sort of consideration of obstacles – racial and socioeconomic – is in fact given? Our analysis finds that race and ethnicity is a significant consideration for colleges, boosting admissions from 4 percent under a system of grades and test scores for African Americans and Latinos to 12 percent enrolled. By contrast, we find that being economically disadvantaged, on net, reduces, rather than improves,

chances of enrolling at one of the 146 most selective colleges. Admission based on tests and grades alone increases socioeconomic diversity marginally, from the current 9 to 12 percent from the bottom half of the income distribution.

The question then becomes: if colleges provided an admissions break to students from lower socioeconomic backgrounds, would these students be able to handle the work at selective colleges?

The conventional view that academic preparation is a monolithic barrier to access and choice among low-SES students is greatly overstated and an unnecessary barrier to policies that can have immediate effects. There are large numbers of students from families with low income and low levels of parental education who are academically prepared for bachelor's degree attainment, even in the most selective colleges. Their numbers are far larger than those who currently attend. According to NCES, low-income students who graduate from high school, at least minimally qualified for college, enroll in four-year institutions at half the rate of their high-income peers.[37]

Even among students who score the same on the NELS test, those in a higher SES category are more likely to take the SAT or ACT and are more likely to go to four-year colleges. While scores on the NELS test correlate very closely with SAT-equivalent scores, this test also demonstrated that a number of students—as many as 300,000—with the apparent potential to achieve relatively high SAT-equivalent scores do not attend a four-year college.
Among those in the top NELS test quartile but the lowest SES quartile, fully 43 percent took neither the SAT nor the ACT, whereas only 13 percent of the high NELS scorers in the top SES quartile did not take either test. Of those in both the top NELS test quartile and the top SES

quartile, 80 percent enrolled within two years after high school in a four-year college. By contrast, only 44 percent of those from the lowest SES quartile who had high NELS test scores went directly to institutions granting bachelor's degrees. In fact, fully 31 percent did not attend any postsecondary institution.[38] They are the low hanging fruit in any policy strategy to increase SES diversity in four-year colleges, including selective colleges.

The effect of SES on postsecondary attendance is evident in the other quartiles of NELS test scores. In the second-highest test-score quartile, 62 percent from the highest SES quartile go directly to four-year colleges, while only 21 percent of those from the lowest SES quartile make that transition. In fact, over one-half of the latter group do not attend any postsecondary institution; the comparable figure for those in the top SES quartile is 11 percent.

As Table 4.1, page 78, shows, not all of those who score high on tests enroll in the best colleges. Of those who had an SAT-equivalent score greater than 1300 and attended a four-year college, only 41 percent went to the 146 top-tier colleges. Twenty-two percent enrolled in second-tier colleges, 25 percent attended third-tier colleges, and 12 percent enrolled in fourth-tier institutions.

Even the top-tier colleges admit candidates with a wide range of SAT or ACT scores. Roughly 20 percent of test takers have an SAT-equivalent score above 1200. There are almost twice as many of these students as there are seats in the 146 top-tier colleges. In fact, only 57 percent of the students enrolling in the top-tier institutions had SAT-equivalent scores above 1200 (see Table 4.1); more than 14 percent scored less than 1100. Because of the joint preferences of these students and the top colleges, top-tier colleges are not simply comprised of top-scoring students.[39]

Even though top-tier colleges have high graduation rates, there appears to be some minimal level of readiness needed. While these institutions do not admit many students with SAT-equivalent scores below 1000, those who do enroll in these colleges are not nearly as successful as other students with higher scores in graduating. Only 61 percent of students admitted to these institutions with a combined SAT-equivalent score of between 900 and 1000 graduate, and this figure drops to 30 percent when the scores are below 900. While a 61 percent graduation rate is in line with the overall graduation rate of 56 percent, it is considerably lower than the 86 percent graduation rate of those students in these colleges with SAT-equivalent scores between 1000 and 1200 (or the 95 percent graduation rate for those with SAT-equivalent scores greater than 1200). Thus, these students with scores below 1000 stand out as a less successful group in this setting. The likelihood of graduating from a selective college, once admitted, is virtually the same for students with SAT-equivalent scores between 1000-1200 (recall Table 2.1). The total number of students who score above 1000, the top quarter of the nation's high school graduating class, is about 812,000

To put these scores in perspective, about half of the high school graduating class takes the SAT or the ACT. These students tend to come from the upper half of academic performers in the graduating class. Roughly half of those score above 1000 on the SAT or achieve an equivalent score on the ACT. We know from historical data that any student who score between 1000 and 1100 on the SAT or an equivalent score on the ACT has a 86 percent chance of graduating from one of the top 146 colleges -- more than twice the graduation rate from four-year schools overall.

Likely graduation rates do increase with score levels. An SAT score or its equivalent on the ACT of 1100-1200, 1200-1300, and 1300 or above increases the likely graduation rate to 85, 96, and 96 percent, respectively.

The top 146 colleges tend to select from this same pool with scores that give them an 86 percent or better chance of graduating. The freshman classes at the selective Tier I colleges include roughly 7 percent who scored below 1000 on the SAT or its equivalent on the ACT, 7 percent who scored between 1000-1100, 20 percent who scored 1100-1200, 30 percent between 1200-1300, and 26 percent who scored better than 1300.[40]

Current practice demonstrates that the qualified pool for selecting students at the top 146 colleges includes all students who score roughly 1000 on the SAT or its equivalent on the ACT. But this gives a qualified pool that is almost five times the number of seats in selective colleges. Because there are many more students academically qualified to go to selective institutions, the standards of choice among them are necessarily complex and controversial. The real question in admissions at selective colleges is "Who is deserving?" not "Who is qualified?"

The reality that many high school students from low-SES families are qualified for college but do not attend or attend but go to colleges that are less selective than their qualifications justify is not widely recognized. The conventional view is that students from low-income families, especially those with low levels of parental education, don't enroll in college, persist to graduation, or don't enroll in selective colleges because they are not academically qualified.

Although SES reduces the likelihood that students from low-income families will be academically prepared to go to college, a substantial share do become prepared, enroll, and graduate. Moreover, those high-performing students from low-SES families who have attended four-year and highly selective colleges have performed as well in terms of grades and graduation rates when compared to similarly qualified students from high-SES families.

5. Simulation of Alternative Admissions Strategies

In this chapter, we examine five alternative practices for creating pools of students qualified for admission to four-year and selective colleges: those with the highest grades and test scores; a lottery with minimum academic qualifications; those with the highest class rank; a class rank plan with minimum academic qualifications; and affirmative action for low-income students. We assess the impact of each alternative on the racial, ethnic, SES, and academic makeup of pools of students qualified for admission.

In all of these approaches, we set a minimum standard of readiness. We assume a minimum SAT-equivalent score of 900 (the NCAA minimum) when we simulate the effects of lotteries. In our analysis of class rank (top 10 percent or top 20 percent), we simulate options without a minimum SAT-equivalent test score and with a minimum SAT-equivalent score of 1000. Affirmative action for low-income students also uses a 1000 SAT-equivalent minimum. Our simulated national pools assume that all those who score over 1300 also will be included. Hence, we are focusing on the 1000-1300 pool generated by the parameters of the different admission models. We chose 1000 as the minimum score in most of our simulations because those who score above 1000 tend to come from the top 25 percent of their graduating class from high

school, tend to be around the middle of the ACT and SAT score distribution and because, students at top-tier colleges with a combined SAT-equivalent score below 1000 have substantially lower graduation rates.

Any admissions plan that admitted a large group of these students would be criticized as "lowering standards" too much. At the same time, we do know that roughly 14 percent of students in the top 146 colleges did not achieve an SAT-equivalent score above 1100 (see Table 4.1), but the graduation rates among those meeting the 1000 point threshold were impressive: among those scoring between 1000 and 1100, 86 percent graduated compared with graduation rates of 85 percent for students who had an SAT-equivalent score between 1100 and 1200, graduation rates at 96 percent for students with SAT-equivalent scores between 1200 and1300, and graduation rates of 96 percent for those with SAT-equivalent scores above 1300. In short, those 14 percent of students at selective colleges in the 1000 SAT-equivalent score range do almost as well as people who score between 1100 and 1200, and their graduation rate from selective colleges is not substantially below those who score above 1300 (see Table 2.1).

It is important to note that these simulations are more a thought experiment than a true representation of actual qualifying or admissions processes at selective colleges. They do not reflect the complexity of the real college admissions process. They do not include a wide variety of admissions criteria from the need to fill up classes in Greek to the demand for oboe or field hockey players. In addition, while we consider each alternative approach separately, actual admissions policies use multiple standards applied differentially on different groups of applicants at different stages of the admissions and financial aid processes.

Alternative Approaches to Admissions

We begin by looking at the baseline enrollments of the entering class at the 146 most selective colleges. We then simulate the effects of five alternative approaches to admissions including:

Alternative 1: Highest grades, test scores, teacher recommendations, and demonstrated leadership. We simulate a model in which admissions decisions are based exclusively on the most easily quantifiable academic measures, including grades, college entrance exam scores, teacher recommendation, and participation and leadership in extracurricular activities.

Alternative 2: Lottery with minimal academic qualifications. All students with an SATequivalent score greater than 900 (the NCAA standard) are considered eligible for the admissions pool at the 146 most selective colleges.

Alternative 3: Class rank. All students who finish in the top 10 or 20 percent of their high school class.

Alternative 4: Class rank with minimum academic qualifications. All students in the top 10 or 20 percent of their class who also scored a minimum of 1000 on their SAT or equivalent score on the ACT.

Alternative 5: Academically qualified but low-SES students. All students with high academic

achievement, outstanding teacher recommendations, and evidence of participation and leadership in extracurricular activities who come from less advantaged families and high schools.

We evaluate each of these five alternatives to college admissions along four criteria:

Criterion 1: Public Approval. Using data from our opinion survey, we assess the extent to which each approach meets with public approval.

Criterion 2: Racial and Ethnic Diversity. The shares and numbers of minorities, especially African Americans and Hispanics, within the qualifying pool.

Criterion 3: Socioeconomic Diversity. The shares of qualifying students from families in the top SES quartile (25 percent) and in the bottom two SES quartiles.

Criterion 4: College Performance. The likelihood of graduating from a selective college.

The Current Enrollment Baseline

Criterion 1: Public Approval. By and large, Americans support college admissions strategies based on academic merit and special talents from the French Horn to football. They also support recognition of background factors that demonstrate striving but most are uncomfortable or opposed to admission based solely on race or ethnicity.

Criterion 2: Racial and Ethnic Diversity. Enrollments at the 146 colleges were comprised of roughly 6 percent Hispanics, 6 percent African Americans, 12 percent Asian in the base year of our data as well as in parallel analysis by Nettles et al. using 1997 data.

Criterion 3: Socioeconomic Diversity. Most students (74 percent) in the most selective colleges come from families in the highest SES quartile, roughly 10 percent come from the bottom two SES quartiles, and only 3 percent come from the bottom income quartile. There is more demographic than economic diversity at selective colleges. The share of African American and Hispanic students is each twice the share of students from the lowest SES quartile. The share of Asian students is four times the share of students from the lowest SES quartile.

Criterion 4: College Performance. Eighty-six percent of students finished their four-year degree at selective colleges.

Alternative 1: Highest Grades, Test Scores, Teacher Recommendations, and Leadership

At one extreme, the "most" and "highly" selective colleges can create qualified pools that include only the most academically qualified students by relying on the measurable criteria of grades and entrance exam scores. Teacher recommendations and extracurricular activities can also be included. But the effect of teacher recommendations and extracurricular activities on inclusion in the qualified pool is unlikely to be large because there are many more candidates with solid teacher recommendations and extensive extracurricular activities than students with high grades and test scores.

Criterion 1: Public Approval. There is widespread support for using grades and test scores as a factor in college admissions decisions. In our survey, 44 percent say grades and test scores should be a very important factor in admissions, 49 percent say somewhat important, and only 6 percent say grades and test scores should not be an important factor in measuring college qualifications.

Criterion 2: Racial and Ethnic Diversity. Using these more narrow criteria, we found that 1.6 percent of the eligible pool were African American and 2.4 percent were Hispanic, a considerable drop from the current 6 percent share for each group.[41] This approach is the only one that would actually reduce the number of Black and Hispanic students in the qualified pool (10,400) below the enrollment levels (15,100) in 1995 and 1997.

One interesting finding in these simulations is that the share of Asians in the eligible pool drops almost in half from 12 percent to 7 percent in the grades/scores approach, compared with the base year as well as with the 1997 data from Nettles et al. We noted earlier that not all high scorers go to the best schools. However, among high scorers, Asians are much more likely to enroll in one of the top 146 colleges than others. They also come from the most affluent families and attend high schools with the lowest share of students with subsidized school lunches and the highest share of students who go on to four-year colleges.

Criterion 3: Socioeconomic Diversity. Using grades and test scores as the criteria for creating the qualified selection pool increases SES diversity. The share of students from the bottom two SES quintiles would increase slightly from the base level almost 10 to 12 percent. While the share of students from low-SES families would increase, 88 percent of students in the selective schools would still come from the top half of the income distribution.

Criterion 4: College Performance. Over 90 percent of students with high-test scores and grades would graduate if admitted to one of the top-tier colleges and universities, a relatively small increase of 4 percent over current levels.

Alternative 2: Lottery with Minimal Academic Qualifications

One approach for raising both social and socioeconomic diversity in top colleges is to rely on a lottery of all qualified students (as measured by a minimum test score). A qualified pool drawn by a lottery of qualified students will reflect the diversity that exists in the qualified pool as a whole. Thus in the extreme case, if there are no academic requirements, a lottery of all 18-year-olds would reflect the racial, ethnic, and SES composition of American youth, resulting in equal shares of seats for each of the four SES quartiles. Of course, the graduation rates of groups chosen without any regard to academic qualifications can be expected to be far lower than presently achieved and surely unsatisfactory to the colleges involved.

Some support lotteries among applicants qualified by a minimum set of scores and grades.[42] The underlying logic of this approach is that many students are capable of keeping up at the top colleges than there are seats available, and all of these students should have a chance of getting this superior education. For instance, based on historical experience, anyone who achieves an SAT-equivalent score above 900 has at least a 69 percent chance of graduating from one of the 146 most selective colleges. But every year, there are many more of these students for every seat at a selective college. One way to choose among them would be with a lottery.

We modeled the lottery admission proposal for the 146 "most" and "highly" selective colleges by looking at all students with a minimum SAT-equivalent score of greater than 900.

We use 900 somewhat arbitrarily but, in part, because it roughly matches the current standard set by the NCAA for student athletes.

Criterion 1: Public Approval. In our survey, fully 83 percent of the public disagree with the idea that colleges and universities should use a lottery to choose which students are admitted. This finding is not surprising given our cultural bias in favor of individuals over groups and a strong preference for merit-based opportunity.

Criterion 2: Racial and Ethnic Diversity. Using the lottery approach with a minimum SAT–equivalent score of 900 would not increase the share of minorities in the qualified pool over current levels. The resulting eligibility pool is 5 percent Black and 4 percent Hispanic. These ratios are just slightly below those of the entering class of 1995 and the analysis by Nettles et al. in 1997. The low shares of minorities in the qualified pool reflect the fact that Blacks and Hispanics are much less likely than Whites to take the SAT or ACT or to score above 900.

While the share of African Americans and Hispanics in the pool is smaller than current enrollments, the size of the pool is so large that the number of Blacks and Hispanics in the qualified pool is six times the number in the current enrollment base.

Criterion 3: Socioeconomic Diversity. Socioeconomic diversity would increase substantially using a lottery to create the qualified pool with only 45 percent coming from the top SES quartile and 27 percent from the bottom two SES quartiles.

Criterion 4: College Performance. The lottery approach with a minimum score of 900 relies on a low standard—only 30 percent of test takers score below 900. As a result, it would likely result in dramatically reduced graduation rates or lowered standards in selective colleges.

Alternative 3: Class Rank

Several states have recently announced a strategy designed to increase opportunity and diversity in their public universities without using race as a criterion by guaranteeing admission to all in-state students who graduate from high school in some top percentage of their classes. Actual percentages vary among states. For example, Texas uses 10 percent, Florida uses 20 percent, and California uses 4 percent. These guarantees are made without regard to scores on national college entrance examinations. Such programs have found favor among those who are looking for ways to balance merit and greater equality of opportunity to learn by race, ethnicity, and income level.

These "class-rank" approaches narrow the merit-based competition for seats at selective colleges to individual high schools, thereby recognizing and partially compensating for the negative effects on school performance of racial and economic isolation. In one sense, these strategies represent a pragmatic compromise between the values of individual merit and opportunity to learn for racial, ethnic, and low-income groups. In concept, they represent a rough ordering of moral priorities. They are merit-based but not indifferent to the effect of admissions procedures on racial, ethnic, and class outcomes.

Criterion 1: Public Approval. The public support admissions plans that reward students who rank high in their own high schools. More than 75 percent of Americans agree that low-income students who get the best grades in their high school should be given preferences in admission to college (although existing class rank plans do not require beneficiaries to be low income). Over one-half agree that low-income students with the best grades or test scores in their

high schools should be admitted, despite the fact that other students in other high schools have higher grades and scores.

Criterion 2: Racial and Ethnic Diversity. Class-rank approaches that apply to the top 10 or 20 percent of students in individual high schools appear to result in shares in qualified pools that that are slightly smaller or slightly larger than the actual enrollment shares in 1995 and 1997. For instance, using the top 10 percent criteria, the qualified pool is 5 percent Black and approximately 7 percent Hispanics. Using the top 20 percent criteria, the shares are 7 percent Black and 8 percent Hispanic.

Class-rank approaches create pools that are larger than the seats available. As a result, the numbers of Blacks and Hispanics in the pool are more impressive than their shares when compared with the 1995 and 1997 enrollment levels. While the shares of African Americans and Hispanics are roughly equivalent to current shares in a 10 percent plan, the numbers of Black and Hispanics double from a total of roughly 15,000 in 1995 to 30,000 in the eligible pool. The 20 percent pool includes an eye popping 68,000 Blacks and Hispanics nationwide.

Criterion 3: Socioeconomic Diversity. High class-rank approaches add social class diversity to the eligibility pool of top colleges. Instead of three-quarters coming from the top SES quartile, only 40 percent of high-class-rank students come from these families. In addition, fully 30 percent come from families in the bottom two SES quartiles—three times the current share.

Criterion 4: College Performance. The problem, however, is that not all of these students are prepared for the academic rigors at top schools. Absent remediation, a substantial share of students from the qualified pool may go to a selective four-year college but not attain a bachelor's degree. Many students with high class-rank, especially in the top 20 percent, do not

take college entrance exams—usually an indicator that they have poor access to information, low levels of social support, and deficits in their college-prep curriculum. Among students in the top 10 percent of their class, 16 percent do not take either the SAT or ACT and another 9 percent have an SAT-equivalent score under 1000. Comparable figures for those in the top 20 percent are even higher: 18 percent do not take a college entrance exam, and 15 percent score below 1000. This means that almost one-quarter of the top 10 percent and one-third of the top 20 percent are likely to have lower graduation rates than the current student body in selective colleges. This suggests graduating rates below 50 percent compared to a much higher graduation rate in the current student body in selective colleges

Preparation issues are especially prominent for African Americans and Hispanics. Among Hispanics and African Americans in the top 10 percent of their high school class, roughly one-quarter either do not take a test or score below 1000. Among African Americans and Hispanics in the top 20 percent of their high school class, approximately one-half either do not take an admissions test or score below the SAT-equivalent score of 1000.The comparable figures for Asians and Whites are 14 and 21 percent, respectively.

Alternative 4: Class Rank with Minimum Academic Qualifications

One way to minimize the low graduation rate found in high class-rank schemes and to garner public support for merit-based admissions is to add a college readiness requirement to class-rank admission schemes. Our modified high class-rank approach only includes students who also have an SAT-equivalent score above 1000. This approach is consistent with the

public's desire to reward achievement (high class rank) and to ensure that the admitted students are prepared to succeed.

Criterion 1: Public Approval. The public support for plans that reward students who achieved high standards in their own high schools would probably increase, if class-rank plans also carry a minimum performance standard.

Criterion 2: Racial and Ethnic Diversity. The top 10 percent class-rank alternative with minimum academic qualifications provides 3 percent Black and 4 percent Hispanic, a smaller percentage when compared with the current enrollment baseline of roughly 6 percent each. The top 20 percent class-rank alternative provides a similar percentage of minorities than the top 10 percent. The top 20 percent with minimum academic qualifications provides 4 percent for Hispanics, and 4 percent for African Americans.

Criterion 3: Socioeconomic Diversity. The added readiness requirement also will decrease the added social class diversity in the eligibility pool of top colleges and universities. Nearly 50 percent of students from the top 10 percent and the top 20 percent class rank with minimal academic qualifications come from high-SES families, compared with 27 percent who come from the bottom two SES quartiles.

Criterion 4: College Performance. Nearly 90 percent of students with high class rank with minimum academic qualifications should graduate.

Alternative 5: Outreach to Academically Qualified Students with Low-SES Backgrounds

In general, our analysis confirms two obvious facts about the American educational pipeline. First, the odds against students from less advantaged families and schools, both either

applying or being selected for entrance into all levels of selective colleges, are higher than the odds against students from more advantaged families and schools. Second, there are numerous students with the proven ability to beat those odds. By itself, admissions policy won't change those odds drastically. Making the odds more even is a challenge for education, economic, and social policymakers. But admissions policies can promote social mobility and student diversity by emphasizing affirmative outreach to students who have beaten the odds by overcoming their origins in less advantaged families and their educational preparation in less advantaged schools.

Such students meet at least three criteria. They are high achievers, as measured by their SAT-equivalent scores between 1000 and 1300 and a high school GPA above 3.0 in core courses. They also demonstrate personal excellence, as evidenced by high recommendations from teachers or demonstrated leadership in extracurricular or community activities. Finally, they come from less advantaged families and/or less advantaged high schools.

We define less advantaged families as those in the bottom 40 percent of the SES scale used by the NCES. To define less advantaged high schools, we use two measures: either a low percentage (less than 25 percent) of seniors going on to four-year colleges or a high percentage (greater than 25 percent) of students receiving lunch subsidies. We also include a combined group in which a student must meet at least one of them. Racial or ethnic characteristics do not enter into any of these definitions.

Criterion 1: Public Approval. The public approves of color-blind outreach to qualified students who come from less advantaged families. If a low-income student and high-income student are equally qualified, fully 63 percent say the low-income student should be admitted over the high-income student.

Criterion 2: Racial and Ethnic Diversity. An admission pool that includes high achievers from families and high schools that meet at least one of our less advantaged criteria will have 11,400 Blacks and 19,200 Hispanics. These figures are considerably higher than the current enrollment baseline of 7,600 African Americans and 7,500 Hispanics. But the pool also is considerably larger. So, a high number of qualified minority students are identified, but colleges will have to face the challenge of deciding which candidates to accept. The share of African Americans in those pools is 4 percent and of Hispanics is 6 percent, compared with current enrollments of 6 percent African Americans and 6 percent Hispanic. A system that included additional factors of socioeconomic disadvantage not measured by our study, such as net worth and single parent household status, might boost racial diversity further.[43]

Criterion 3: Socioeconomic Diversity. Using any approach that identifies high achievers from less advantaged families and high schools results in much more socioeconomic diversity than any of the other approaches. The added students will contribute a great deal of social diversity. The percentage of students in the bottom two SES quartiles will rise from 10 percent, currently, to 38 percent.

Criterion 4: College Performance. These students are as likely to succeed as students with comparable academic backgrounds but who do not come from less advantaged families or high schools. We expect slightly less than 90 percent to graduate if they enroll in one of the 146 most selective colleges.

Our research shows that students from less advantaged families and high schools performed much like students from more advantaged backgrounds in the same SAT-equivalent range. In both groups, just slightly less than half earned bachelor's degrees, and almost 10

percent had graduate degrees. In our combined group of high achievers facing at least one set of educational hurdles, only 6 percent had no postsecondary education versus a 9 percent level for all students who scored between 1000 and 1300. This comparable performance demonstrates that once high-performing students from low-SES families get the chance, they are able to succeed. The problem is that they are less likely to attend Tier-1 colleges, even when they have the abilities.

6. Policy Recommendations

We suggest four sets of policy recommendations based on our findings: class-rank plans are fraught with difficulty; economic affirmative action should be widely adopted; race based affirmative action should be maintained; and financial aid policies must be reoriented toward need.

• ***Class Rank Approaches Are Fraught with Difficulty.***

Class-rank approaches are a proven political winner, but we have serious reservations about the plans. They reflect an effective ordering of public values because merit is primary and explicit while race, ethnicity, and SES are secondary and implicit yet, as we have seen, suffer from the fact that they include many students who will find the work at selective colleges difficult, discouraging persistence and minimizing choices in the curriculum. Class-rank approaches tied to assessments that trigger remediation, would add readiness, although they reduce diversity.

Another problem with the class rank approach is "creaming" even within schools where most students come from lower-SES or minority backgrounds. Virtually all high schools include students from a variety of SES backgrounds. As shown in Table 6.1, page 78, even in the poorest high schools, 32 percent of students come from the top two economic quartiles. Moreover, those in the top 10 percent by grades are disproportionately wealthy. Even in the "poorest" schools, nearly 60 percent come from families in the top two SES quartiles. As a result, approaches that focus on class rank, high school quality, or low-income neighborhoods will tend to favor the higher SES within the pool. In other words, class-rank and other approaches that include a minimum qualification reward the highest SES students in low-SES schools and neighborhoods.

• ***Economic Affirmative Action Should Be Expanded.***

We endorse a much more vigorous use of economic affirmative action. College admissions officers and the public sensibly say that merit should be defined with a consideration of obstacles overcome, yet our analysis finds that low-income students are hugely underrepresented at selective colleges, and many more of them could be admitted and succeed.

Much of the solution simply involves aggressive outreach. The current public dialogue tends to emphasize the decisions that highly selective colleges make when choosing among applicants. But most college admissions decisions are made long before the admissions officers get into the act. Almost half of high school students do not go to any postsecondary institution immediately after high school. Even among students who do go to college, students and families choose colleges more than colleges choose students and their families.

In the public view, academic merit is primary but high performance on the part of disadvantaged students is deemed appropriate for giving preferences among qualified students. There is broad support for giving special consideration for high-performing disabled students and students from low-income families, especially low-income single parent families.

Moreover, preferences for low-income students can help promote racial diversity compared with a system of admissions based on grades and test scores. When all reported incomes are adjusted for family size, 41 percent of Hispanics, 33 percent of African Americans, and 14 percent of non-Hispanic Whites are living in families below the "minimum but adequate" level, as measured by the U. S. Department of Labor. In addition, there appears to be many African Americans and Hispanics who are qualified but who do not go on to four-year colleges. For example, in our analysis, we found a total of roughly 12,000 African Americans and Hispanics who scored in the top quartile of the NELS test but did not attend a four-year college directly after high school. There were another 14,000 African Americans and 18,000 Hispanics who were in the upper half of the NELS test score distribution who did not attend a four-year college directly after high school. Like low-SES students, African Americans and Hispanic students have higher threshold requirements for attending four-year colleges, even with affirmative action policies in place.

Using a SES preference expands the pool of qualified minority students substantially, since the current enrollment of minority students in selective colleges are not drawn in any large measure from the qualified low-SES pool. If we admitted all the minimally qualified minority students in the bottom half of the income distribution we would add as many as 11,000 African Americans and 15,000 Hispanics in the most selective colleges, roughly doubling the current

number. In addition, selecting African Americans and Hispanics disproportionately among the qualified pool of low-SES students increases the legal legitimacy and public support for campus diversity goals, because of the broad public support for income-based admissions and because low-income minority students are chosen on the basis of multiple criteria rather than "race alone."

- ***Maintain Racial Affirmative Action.***

While socioeconomic preferences help produce some racial diversity, we have yet to find a credible procedure that can produce the level of diversity that exists today without purposely selecting African Americans and Hispanics at some point in the selection process. We can indeed identify a large number of qualified minority students, using class-rank and SES pools, for instance, but they represent a fairly small share of our newly identified talented students. The choice between race or income preference and merit is a false choice in a system where admissions are already based on multiple criteria.

Income- and race-based policies have overlapping effects but they are not the same. While African Americans and Hispanics are disproportionately from low-SES families, low-SES families are disproportionately White. The qualified pool of low-SES students increases the number of qualified African Americans and Hispanics compared to current enrollments, but not their share of the qualified pool. Hence, income-based policies are not effective substitute for racial and ethnic enrollment goals, unless low-income African Americans and Hispanics can be chosen disproportionately from the qualified pool of low-SES students or chosen as a

supplement to the middle- and upper-income African Americans and Hispanics currently enrolled.

For instance, our own simulation of the pool of qualified students from the bottom half of the SES distribution includes all low-SES students who have an SAT score of 1000 or better (or an equivalent ACT score) as well as high grades, teacher recommendations, and proven leadership. Our pool of qualified low-SES students includes one and one half times the number of African Americans as were actually enrolled at the time and more than two and a half times as many Hispanics as were actually enrolled. Yet, African Americans and Hispanics make up only 4.0 percent and 5.8 percent of the entire pool of qualified low-SES students, compared with their current 6 percent share of seats at selective colleges. As a result, unless they are chosen disproportionately in the low-SES qualified pool or chosen in addition to those from middle- and high-income families already enrolled, African Americans would lose ground relative their current 6.0 percent share of seats in the most selective colleges and Hispanics would barely retain their current share.

The total number of students who score above 1000, the top quarter of the nation's high school graduating class, is about 812,000, of whom 35,000 are African American and 31,000 are Hispanic. Overall these 66,000 African American and Hispanic students who meet our minimal qualification are roughly four times the enrollment in the year of our study. Roughly 30 percent of these African Americans and 50 percent of the Hispanics are from the bottom half of the family income distribution or attend a less advantaged high school. Hence, policies that focus exclusively on admissions for less advantaged students will exclude 24,000 qualified but

relatively advantaged African Americans and 13,600 Hispanics if we admit only those from the bottom half of the income distribution.

Moreover, as a political matter, affirmative action defines the debate over admissions to selective colleges. All other proposals for expanding access and choice are measured by their implication for affirmative action. As a result, any discussion of selective college admission gets hopelessly entangled in a thicket of race, partisan politics, and idealism. Opposition to affirmative action has become a bottleneck for expanding the role of SES, or other non-racial categories of disadvantage, in admissions to selective colleges.

While the support is broad for income-based policies, including income-based affirmative action, it is superficial and unorganized. In part, this is because the natural proponents of such policies in the liberal/labor and civil rights communities fear that income-based policies will be used in a political shell game to supplant race-based affirmative action. Hence, the lost momentum on affirmative action reduces our ability to institute policies to promote opportunity for students from low-income families. Politically speaking, the best way to pursue economic affirmative action, in our judgment, is as a supplement to, rather than a replacement for, racial affirmative action.

- ***Financial Aid Policies.***

Creating diverse pools of qualified students is a necessary but insufficient condition for increasing access to selective colleges for low-income majority and minority students. The costs of four-year colleges, especially selective colleges, still present a final barrier to access for qualified low-income students.

Removing non-financial barriers to enrollment in four-year and selective colleges will only make matters worse for qualified low-income students if financial barriers remain. Compared with similarly qualified students from more affluent families, college-qualified low-income students have higher financial threshold requirements for enrolling in four-year colleges, especially the more expensive selective colleges. Compared with students from more affluent families, qualified low-income students have higher levels of unmet financial need after aid contributions are taken into account. They face greater loan burdens and are more debt averse. Financial barriers to college enrollment among students from low-income families are significant and growing. The value of Pell grants as a percentage of the costs of college attendance has fallen precipitously since the 1970s. College costs as a percent of family income has remained stable among students in the top 40 percent of the family income distribution, but increased substantially for lower-middle and low-income families. Unmet financial need -- total price minus all student aid -- was roughly equivalent across income classes in the 1974-75 school year and is still the same for high-income families but has since doubled for low-income families.

Already huge numbers of low-income and minority students are prepared for college but unable to afford college altogether, unable to attend the more selective and expensive colleges, or unable to persist to graduation. These students don't need better preparation. Their problem can be handled in the short term by restoring levels of "unmet financial need" to the levels achieved in the early 1970s.

Barriers arise in the process for determining financial aid as well as the overall size and composition of the aid package for low-income majority and minority students.

The practice of making financial aid decisions after admissions are completed

discourages low-income students from applying to college, especially the more expensive selective colleges. In addition, the excessive loan burdens in student aid packages foisted on low-income students also discourages applications as well as persistence to graduation, especially in four-year colleges.

Frontloading aid decisions and the grant portions of aid packages is an obvious solution. Frontloading admissions and aid decisions for low-income students would require outreach into the early high school years, a critical juncture in academic preparation and the formation of college expectations.

Frontloading federal Pell Grants as well as state and college aid would defer loans and move toward an equalization of risks and loan burdens between low-income and high-income students.

In order to ensure that frontloading did not create disproportionate incentives to attend two-year and proprietary programs, frontloaded aid would only apply to the first half of the required tenure for degree attainment. Hence, the first year of a two-year program and the first two years of a four-year program would be paid for with grant aid.

Frontloading aid for the first year of two-year programs and the first two years of four-year programs also would encourage the development of more coherent and low-cost pathways from two-year colleges where low-income and minority students are concentrated, to four-year schools, where they are not.

Meeting the financial need of low-income students is in keeping with the American view of merit, and, as we saw, has strong public support (recall Table 3.9). Need based aid policies,

coupled with admissions criteria that reflect a dynamic view of merit, are fully consistent with the American principle of merit-based opportunity.

Notes

[1] Our findings on the minority shares in using 1995 data have since been validated by a similar study of minority shares at selective colleges in 1997. The two years of data show no change in shares. Michael T. Nettles, Catherine Millet, Marne K. Einarson, University of Michigan, "A Hierarchical Model of Influence on College Admissions Test Performance" (Presentation at the 41st Annual AIR Forum, June 5, 2001).

[2] Clifford Adelman, Answers in the Tool Box: Academic Intensity, Attendance Patterns, and Bachelor's Degree Attainment (Washington, D.C.: U.S. Department of Education, 1999).

[3] Our analysis includes the 1995 freshman class at selective colleges. More recent analysis for he 1997 freshman class shows no change in the share of African American and Hispanic enrollment. More recent income data are not available but trends in prices, admissions policy, and student aid policy suggest, ceteris paribus, that the share of low-income students at selective colleges should have gone down.

[4] Caroline M. Hoxby, "How The Changing Market Structure of Higher Education Explains College Tuition," NBER Working Paper # 6323 (Cambridge, MA: National Bureau of Economic Research 1997) Appendix Table 5.

[5] See A. Light and W. Strayer, "Determinants of College Competition: School Quality or Student Ability?" Journal of Human Resources 25, No. 2 (Spring 2000), pp. 299-332. Light and Strayer also show that there is a higher graduation rate at more selective institutions. They argue however that the proper match between student ability and selectivity of the college is important: while more-qualified students have higher graduation rates at more selective institutions, the pattern is reversed for less qualified students who graduate in higher proportions at less selective colleges.

[6] See W. G. Bowen and D. Bok, The Shape of the River (Princeton, NJ: Princeton University Press, 1998), pp. 60-63. Bowen and Bok also document the relationship between SAT scoring and college graduation rates at the institutions that they studied. See N. W. Burton and L. Ramist, Predicting Success in College: SAT Studies of Classes Graduating Since 1980 (New York: College Entrance Examination Board, 2001). Burton and Ramist provide an exhaustive survey of how SAT scores predict success in college.

[7] We confirmed this analysis using a Probit analysis of this data: the coefficient on attending a top-tier college was positive and statistically significant even when a student's college entrance exam score and demographic background were included.

[8] C. Adelman, Answers in the Tool Box: Academic Intensity, Attendance Patterns, and Bachelor's Degree Attainment (Washington, D.C.: U.S. Department of Education, 1999).

[9] See W. G. Bowen and D. Bok, The Shape of the River (Princeton, NJ: Princeton University Press, 1998), p. 107. Bowen and Bok document a similar relationship between college entrance exam score and graduate school going.

[10] A Probit analysis of this data shows that attending a top-tier college is a positive factor for attending graduate school even controlling for student background and ability. See D. J. Brewer, E. Eide, and R. G. Ehrenberg, "Does it Pay to Attend an Elite Private College? Evidence on the Effects of Undergraduate College Quality on Graduate School Attendance" Economics of Education Review 17, No. 4, (1998), pp. 371-376. Brewer et al. find similar results.

[11] R. G. Wood, M. E. Corcoran, and P. N. Courant, "Pay Differences among the Highly Paid: The Male-Female Earnings Gap in Lawyers' Salaries" Journal of Labor Economics 11, No. 3 (July 1993), pp. 417-441.

[12] R. Dunifon and G. J. Duncan, "Long-Run Effects of Motivation on Labor-Market Success" Social Psychology Quarterly 61, No. 1 (1998), pp. 33-48.

[13] J. Cawley, J. Heckman, and E. Vytlacil, "Cognitive Ability and the Rising Return to Education," NBER Working Paper 6388 (Cambridge, MA: National Bureau of Economic Research, 1998).

[14] U.S. Department of Education, National Center for Education Statistics, College Quality and the Earnings of Recent College Graduates, NCES 2000-043 (Washington, D.C.: U.S. Government Printing Office, 2000).

[15] T. J. Kane, "Racial and Ethnic Preference in College Admissions" in C. Jencks and M. Phillips, eds., The Black-White Test Score Gap (Washington, D.C.: Brookings Institution Press, 1998).

[16] K. Daniel, D. Black, and J. Smith, "College Quality and the Wages of Young Men" (Mimeo, The Wharton School of University of Pennsylvania, University of Kentucky, University of Western Ontario, March 1997).

[17] See W. G. Bowen and D. Bok, The Shape of the River (Princeton, NJ: Princeton University Press, 1998).

[18] S. B. Dale and A. Krueger, "Estimating the Payoff to Attending a more Selective College: An Application of Selection on Observables and Unobservables" (Mimeo, Woodrow Wilson School, Princeton University, November 1999). Students from low-SES families earn more than similarly situated students who do not attend highly selective colleges and get a bigger payoff than students from better-off families for going to a highly selective, Industrial Relations Section: Working Paper #409, Princeton U.,

[19] D. J. Brewer, E. Eide, and R. G. Ehrenberg, "Does it Pay to Attend an Elite Private College? Evidence on the Effects of Undergraduate College Quality on Graduate School Attendance" Economics of Education Review 17, No. 4 (1998), pp. 371-376.

[20] J. R. Behrman, M. R. Rosenzweig, and P. Taubman, "College Choice and Wages: Estimates Using Data on Female Twins" The Review of Economics and Statistics LXXVIII, No. 4 (November 1996), pp. 672-685.

[21] J. R. Behrman, M. R. Rosenzweig, and P. Taubman, "College Choice and Wages: Estimates Using Data on Female Twins" The Review of Economics and Statistics LXXVIII, No. 4 (November 1996), pp. 672-685.

[22] The College Board, Toward a Taxonomy of the Admissions Decision-Making Process (New York: College Entrance Examination Board, 1999).

[23] Breland, Hunter, James Maxey, Renee Gernand, Tammie Cumming, and Catherine Trapani. Trends in College Admission 2000: A Report of a Survey of Undergraduate Admissions Policies, Practices, and Procedures. Internal Memorandum.

[24] The complete survey has a margin of error of plus or minus 3 percentage points.

[25] CBS/New York Times poll, December 6-9, 1997.

[26] Based on an analysis of the 1996 National Election Studies survey conducted by the Institute for Social Research at the University of Michigan.

[27] A. Sanderson, B. Dugoni, K. Rasinski, and J. Taylor, National Education Longitudinal Study 1988-1994, Descriptive Report with an Essay on Access and Choice in Postsecondary Education, U.S. Department of Education, National Center for Education Statistics, NCES 96-175 (Washington, D.C.: U.S. Government Printing Office, 1996).

[28] In families with high expectations, 76 percent took the SAT or ACT and 50 percent scored above 1000. In families with low expectations, only 28 percent took a college entrance exam and 9 percent scored over 1000.

[29] This estimate of the share of SES families in the lowest quartile of test takers is probably too low. About 30 percent of the sample did not take the test. This group was heavily concentrated about the lowest-SES families and, from other data, we know that those who didn't take the NELS test were least likely to graduate from high school and have college aspirations.

[30] C. M. Hoxby, "Peer Effects in the Classroom: Learning from Gender and Race Variation," NBER Working Paper 7867 (Cambridge, MA: National Bureau of Economic Research, 2000). E. A. Hanushek, J. F. Kain, J. M. Markman, and S. G. Rivkin, "Does Peer Ability Affect Student Achievement?" NBER Working Paper 8502 (Cambridge, MA: National Bureau of Economic Research, 2001).

[31] We tried other metrics, such as low "school social capital" (measured by such factors as the safety of the high school as well as by the teachers' interest in their students) and percent going on to four-year colleges, and found similar results.

[32] John Powell, "Socioeconomic School Integration," Poverty & Race Research Action Council, www.prrac.org, Vol. 10, N. 6 (Washington D.C., November/December 2001) p. 6.

[33] Glenn C. Loury, The Anatomy of Racial Inequality (The W.E. Du Bois Lectures, Cambridge, MA: Harvard University Press, 2002).
[34] Michael Walzer, Thick and Thin: Moral Argument At Home and Abroad, (Notre Dame, IN: Notre Dame University Press, 1996).
[35] Glenn C. Loury, The Anatomy of Racial Inequality (The W.E. Du Bois Lectures, Cambridge, MA: Harvard University Press, 2002) p. 166.
[36] Glenn C. Loury, The Anatomy of Racial Inequality (The W.E. Du Bois Lectures, Cambridge, MA: Harvard University Press, 2002), p. 74.

[37] Brian Fitzgerald et al., Access Denied: Restoring The Nation's Commitment To Equal Opportunity (A Report of the Advisory Committee on Student Financial Assistance, Washington, D.C., February 2001).

[38] See A. P. Carnevale, R. Fry, and S. Turner, Against the Odds...Is College Graduation Declining for Low-Income Youth? (Princeton, NJ: Educational Testing Service, forthcoming). These findings are confirmed in another study performed by ETS using a different data set—the Panel Study of Income Dynamics. Controlling for other background factors, about six out of every ten adolescents from families with incomes in excess of $65,000 will complete at least one year of college before age 25, while only one-third from families with incomes of less than $30,000 will do so. Roughly 40 percent of higher-income students will achieve bachelor's degrees, compared with 13 percent of students from lower-income families. The share of students who complete a year of college or get a bachelor's degree has risen among both high- and low-income students since the 1970s but the gap has remained the same.

[39] See W. G. Bowen and D. Bok, The Shape of the River (Princeton, NJ: Princeton University Press, 1998), p. 27. Bowen and Bok use a unique data set from 28 elite colleges and find that only two-thirds of White applicants with SAT-equivalent scores greater than 1500 are offered admission.

[40] These percents do not add to 100 percent because our data show that almost 10 percent of students at selective colleges do not take the SAT or ACT.

[41] Other studies tend to confirm this result. For instance, in Statistics in Brief: Making the Cut: Who Meets Highly Selective College Entrance Criteria?, the NCES performed a similar exercise. Using criteria of GPA>3.5; SAT-equivalent >1200, core courses in basic English, math, and science, high teacher recommendations, and participation in at least two extracurricular activities, they found that only 0.4 percent of Blacks versus 6.5 percent of Whites met all the criteria. Using these criteria, African Americans would make up 1 percent of the applicant pool for selective college admissions.
[42] For discussion of lotteries, see e.g. Susan Sturm and Lani Guinier, The Future of Affirmative Action: Reclaiming the Innovative Ideal, CAL. L. Rev. 84:953, 968 (1996); Berger, Paul D., Chen Wang, and James P. Monahan. 1998. "Quantifying a Statistical Aspect of Segmented Selection/Quota Systems." The American Statistician 52 (August): 228-232; Cohen, Richard. 1994. "Bounding of Test Scores as a Merit-Based Remedy for Employment Discrimination." Remarks at Joyce Foundation conference on "The Civil Rights Act of 1964 in Perspective."

National Judicial Center, Washington, DC. November; and Grofman, Bernard, and Samuel Merrill. 2000. "Lottery-Based Affirmative Action in Education: Anticipating Likely Consequences." Research supported by the Program in Methodology, Measurement and Statistics, National Science Foundation, via SBR 97-30578.

[43] See e.g. Richard D. Kahlenberg, "In Search of Fairness," Washington Monthly, June 1998, pp. 26-30.

Tables and Figures

Table 1.1

Socioeconomic Status of Entering Classes					
	SES Quartiles				
	First	Second	Third	Fourth	Total
Tier 1	3%	6%	17%	74%	100%
Tier 2	7%	18%	29%	46%	100%
Tier 3	10%	19%	36%	35%	100%
Tier 4	16%	21%	28%	35%	100%
Community Colleges	21%	30%	27%	22%	100%
Authors' analysis of the National Educational Longitudinal Study (NELS:88).					

Table 2.1

College Graduation Rates Relate Both to Students' SAT-equivalent Scores and to College Selectivity								
	All	Non-Taker	<900	900 to 1000	1000 to 1100	1100 to 1200	1200 to 1300	>1300
All	65%	58%	43%	69%	74%	74%	85%	88%
Tier 1	86%	83%	30%	61%	86%	85%	96%	96%
Tier 2	71%	65%	44%	71%	83%	70%	85%	90%
Tier 3	61%	55%	45%	74%	71%	68%	78%	78%
Tier 4	54%	45%	39%	61%	67%	83%	78%	68%
Authors' analysis of High School and Beyond.								

Table 2.2

	Graduation Rates by Selectivity Tier				
SES Quartiles	All	First	Second	Third	Fourth
All	65%	86%	71%	61%	54%
Lowest Quartile	55%	76%	61%	60%	40%
Second Quartile	63%	85%	63%	58%	63%
Third Quartile	63%	80%	71%	59%	55%
Highest Quartile	73%	90%	79%	66%	58%
Authors' analysis of the High School and Beyond Sophomore cohort.					

Table 2.3

Graduate School Attendance By SAT-Equivalent Score and Selectivity of the College (percent of initial attendees)					
	All	< 900	900-1000	1000-1200	> 1200
All	21	10	13	21	38
By Level of Selectivity					
Most and highly competitive	35	19	15	25	48
Very competitive	25	15	14	22	43
Competitive	18	10	15	20	28
Less and noncompetitive	15	8	9	22	26
Authors' analysis of the High School and Beyond Sophomore cohort.					

Table 3.1

Special Recruiting Activities Targeting Various Subgroups of Students 1992 and 2000 (Percent)

Group	Two-Year Public		Two-Year Private		Four-Year Public		Four-Year Private		All Institutions	
	1992	2000	1992	2000	1992	2000	1992	2000	1992	2000
Racial/ethnic minorities	66	49	36	21	91	66	65	54	67	51
Disadvantaged (as distinct form racial/ethnic minorities)	45	47	24	16	44	37	24	24	35	33
Students with disabilities	35	31	15	12	21	12	12	10	22	17
Students with special talents in art, music, etc.	36	33	30	18	71	54	59	57	51	46
Adults seeking career change	65	63	63	58	59	43	55	41	60	52
Adults improving tech skills	^	62	^	50	^	^	^	^	^	^
Adults maintain currency in job		60		46						
Out-of-state/district	28	31	40	31	55	57	59	52	46	45
Part-time students	45	48	40	33	25	21	29	21	35	32
Veterans	32	27	29	28	24	15	13	8	23	17
Number of Institutions Responding to Questionnaire	705	505	169	177	366	305	784	657	2,024	1,644

Source: Breland, et al.

Notes: 2000 summary data for this table were obtained from responses to questions 18 and 30 of the two- and four-year questionnaires, respectively. Percentages are based on the total number of institutions responding to the questionnaire.

^ Not included in the questionnaire for fall 1992 for two-year institutions or in four-year questionnaire.

Table 3.2

Financial Aid Offered to Accepted Applicants in Two-Year and Four-Year Institutions, 1979 and 2000

	Two-Year Institutions (Public and Private)		Four-Year Institutions (Public and Private)	
	1979	2000	1979	2000
Offer no-need awards	51	61	51	61
Offer modified packaging	34	30	34	
Offered to:				
• Athletes	51	32	51	32
• Racial/ethnic minorities	26	32	26	32
• Disadvantaged students	22	29	22	29
• Students with special nonacademic talents	40	37	40	37
• Academically talented students	61	57	61	57
• Students from different geographical locations in the United States	12	20	12	20
• International students	•	25	•	25
• Students with disabilities	•	17	•	17
Number of Institutions Responding to Questionnaire	1,463	1,644	1,463	1,644

Source: Breland, et al.
Notes: 2000 summary data for this table were obtained from responses to questions 35 and 36 of the four-year questionnaire. Percentages are based on the total number of institutions responding to the questions.

Table 3.3

A primary role for schools in helping young people get ahead	Should play a...		
	Primary Role (percent)	Some Role (percent)	No Role (percent)
Public schools	72	26	2
Public colleges and universities	61	35	2
Private colleges and universities	47	45	5
Business and industry	39	53	5
Churches and faith-based organizations	39	52	7
Government	38	46	15
Military	24	53	5

Table 3.4

What helps and hurts in life	Advantage (percent)	Disadvantage (percent)
Not getting a college education	7	87
Going to a low-quality/low-income high school	7	85
Growing up in a family that doesn't speak English	8	84
Growing up in a low-income family	10	83
Growing up in a single-parent family	7	80
Growing up in a low-income Black family	7	78
Growing up in a low-income Hispanic family	6	77
Growing up in a low-income White family	12	71
Being Hispanic	19	51
Being African American	21	49
Being White	57	13
Growing up in a wealthy family	73	15

Table 3.5

American values and opportunity	Agree (percent)	Disagree (percent)
We should help people who are working hard to overcome disadvantages and succeed in life	93	6
People who start out with little and work their way up are the real success stories	91	7
Some people are born poor, and there's nothing we can do about that	26	72
We shouldn't give special help at all, even to those who started out with more disadvantages than most	16	81

Table 3.6

How often, if ever, do you think qualified students from low-income families should have an advantage over equally qualified students who are not from low-income families in getting into a college or university?	Percent
Always	15
In some cases	50
Only rarely	15
Never	16
Depends	1

Table 3.7

Two students have an "A" average in high school and get the same score on college admissions tests. If there is only one seat available, which student would you admit to college?	Percent
Student from low-income family	63
Student from high-income family	3
Both/Neither	12
Don't know	20

Table 3.8

If there is only one seat available, which student would you admit to college, the high-income student or the low-income student?	Percent
Both students get the same admissions test score?	
Low-income student	63
High-income student	3
Low-income student gets a slightly lower test score?	
Low-income student	33
High-income student	54
The low-income student is also Black, and the high-income student is White?	
Low-income student	36
High-income student	39
The low-income student is also Hispanic, and the high-income student is not Hispanic?	
Low-income student	33
High-income student	45

Table 3.9

Helping low-income students get a college education	Favor (percent)	Oppose (percent)
Increased funding for SAT and ACT exam prep classes	81	17
Increased funding for scholarships and loans	79	18
Increased funding for AP courses in all high schools	78	17
Increased funding for college tutoring and counseling	73	24
An increase in state or local taxes	42	55
An increase in tuition at state universities	29	66

Table 3.10

High-Scoring Students Are from the Highest SES Quartile								
				SAT Scores				
		All	Non-Taker	<1000	1000 to 1100	1100 to 1200	1200 to 1300	>1300
SES Quartiles	First	25	37	21	8	6	4	3
	Second	26	30	25	24	17	14	10
	Third	26	22	30	32	29	23	22
	Fourth	23	10	24	36	47	58	66
Authors' analysis of the National Educational Longitudinal Study (NELS:88).								

Table 3.11

Effect of High School Attendance on Scholastic Performance		
Student SES Quartile	Type of High School	Share in Top Half of NELS Test
Lowest Quartile	High Income*	36
	Medium Income*	28
	Low Income*	24
Second Quartile	High Income*	49
	Medium Income*	44
	Low Income*	42
Third Quartile	High Income*	64
	Medium Income*	58
	Low Income*	53
Highest Quartile	High Income*	77
	Medium Income*	68
	Low Income*	70
*High income = less than 10 percent received subsidized lunch; Medium income = between 10 and 30 percent receiving subsidies; Low income = greater than 30 percent subsidized.		
Authors' analysis of the National Educational Longitudinal Study (NELS:88).		

Table 3.12

Socioeconomic Status, High School, and Post-High School Education								
					College Selectivity			
SES Quartile	High School Attended	No Postsecondary	2-Year College	4-Year College	Highest	Second	Third	Lowest
Lowest Quartile	High Income*	63	23	14	2	2	7	3
	Medium Income*	67	21	12	1	1	5	4
	Low Income*	65	21	13	0	2	5	7
Second Quartile	High Income*	44	32	25	1	5	12	6
	Medium Income*	47	34	20	2	3	8	7
	Low Income*	50	25	24	1	6	10	8
Third Quartile	High Income*	29	28	43	5	7	22	9
	Medium Income*	32	25	42	5	8	20	9
	Low Income*	31	29	39	2	8	19	11
Highest Quartile	High Income*	10	26	64	22	16	16	10
	Medium Income*	16	23	61	12	9	24	16
	Low Income*	17	19	63	13	9	26	16
*High income = less than 10 percent received subsidized lunch; Medium income = between 10 and 30 percent receiving subsidies; Low income = greater than 30 percent subsidized.								
Authors' analysis of the National Educational Longitudinal Study (NELS:88).								

Table 4.1

All Colleges Admit Students With a Wide Range of SAT-Equivalent Scores							
	Non-Taker	<1000	1000 - 1100	1100 - 1200	1200 - 1300	>1300	Total Percent
Tier 1	9%	7%	7%	20%	31%	26%	100%
Tier 2	15%	15%	19%	25%	15%	11%	100%
Tier 3	12%	32%	19%	21%	9%	6%	100%
Tier 4	22%	37%	15%	15%	5%	6%	100%
2-Year Colleges	55%	28%	8%	7%	1%		100%
Authors' analysis of the National Educational Longitudinal Study (NELS:88)							

Table 6.1

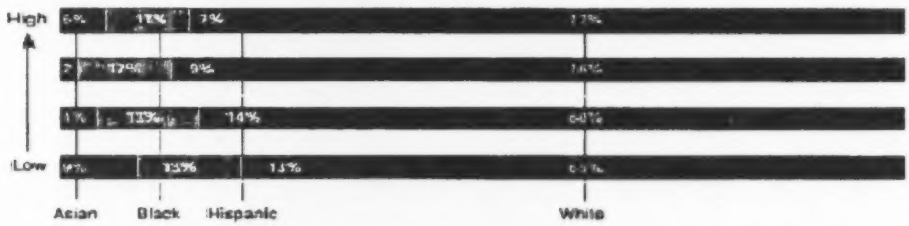
Social Composition of High Schools and High Ranking Students					
		--------Socioeconomic Quartiles---------			
		1 Lowest	2	3	4 Highest
All Students in Schools by Percent Receiving Subsidized Lunches					
	Low (0-10%)	14	23	30	33
	Medium (10-30%)	26	31	27	16
	High (>30%)	41	27	21	11
Top 10 %	All	11	19	29	41
	Low (0-10%)	7	20	24	49
	Medium (10-30%)	9	18	37	36
	High (>30%)	22	20	31	28

Figure 3.1

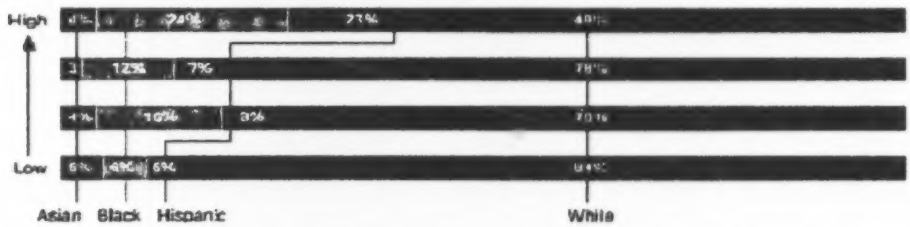
Blacks and Hispanics Are More Concentrated in Less Advantaged Schools

Percent of students in each race/ethnic group

School Indicator #1: Percent of Seniors Going to Four-Year Colleges



School Indicator #2: Percent of Seniors Receiving Subsidized Lunch



Authors' analysis of the National Educational Longitudinal Study (NELS:88)

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